

REMARKS

Reconsideration of this application in view of the foregoing amendments and the following remarks is requested.

Claims 1-16 were pending for consideration in this application. Claims 1, 2, 4, and 6-15 are amended herein, claims 3 and 5 are canceled, and new claims 17 and 18 are added. Claims 1, 7, and 12 are amended to clarify aspects of the invention and the dependent claims are amended for clarity and/or to conform to amendments to the independent claims. Claims 1, 2, 4, and 6-18 are now pending.

Rejections under 35 U.S.C. § 112

Claims 1-6 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claims 3 and 5 are canceled herein, thus rendering this rejection moot as to those claims. To the extent that this rejection may still apply to the remaining amended claims, the rejection is traversed.

Claim 1 is rejected as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. The Examiner asserts that the omitted essential element is “an element that provides trace stream during primary code execution, upon which continued operation, as claimed at line 5 of claim 1, is based.” Claim 1 is amended herein to remove the phrase “while continuing to provide timing trace streams during primary code execution” thus removing any need to cite an element as suggested by the Examiner. Thus, amended claim 1, as amended, is not indefinite. Claims 2, 4, and 6 depend from claim 1 and are not indefinite for at least the same reasons. Accordingly, withdrawal of this rejection is requested.

Rejections under 35 U.S.C. § 103

Claims 1-3, and 5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,859,891 (“Edwards”) in view of U.S. Patent No. 3,659,272 (“Price”). Claims 3 and 5 are canceled herein, thus rendering this rejection moot as to the canceled

claims. To the extent that this rejection may still apply to the remaining amended claims, the rejection is traversed.

Amended claim 1 recites a trace apparatus that includes a trigger unit that generates control signals corresponding to three states of a target processor, and a timing trace apparatus and a program counter and data trace apparatus that are both responsive to the control signals to provide their respective trace streams. Amended claim 1 further recites that the control signals generated by the trigger unit *individually* enable and disable *each of* the timing trace apparatus and the program counter and data trace apparatus based on the current state, *i.e.*, a primary code execution state, a secondary code execution state, or an execution halt state, of the processor. Thus, claim 1 clearly requires that the timing trace apparatus and the program counter and data trace apparatus are separately controllable by the trigger unit and may each be disabled or enabled based on the current state of a processor having multiple states. Applicant has reviewed the art cited by the Examiner in rejecting claim 1 and finds nothing in the combination of Edwards and Price that teaches or suggests these limitations of amended claim 1.

In view of the above, amended independent claim 1 is patentable over the combination of Edwards and Price. Claim 2 depends from claim 1 and is thus patentable over Edwards and Price for at least the same reasons. Accordingly, withdrawal of this rejection is requested.

Claims 7-11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Edwards and Price. To the extent that this rejection may still apply to the amended claims, the rejection is traversed.

Amended claim 7 recites a method of generating trace streams in a target processor in which generation of each of a timing trace stream, a program counter trace stream, and a data trace stream can be *individually* enabled or disabled based on a current state of the target processor. Applicant has reviewed the art cited by the Examiner in rejecting claim 7 and finds nothing in the combination of Edwards and Price that teaches or suggests these limitations of amended claim 7.

In view of the above, amended independent claim 7 is patentable over the combination of Edwards and Price. Claims 8-11 depend from claim 7 and are thus

patentable over Edwards and Price for at least the same reasons. Accordingly, withdrawal of this rejection is requested.

Claims 12-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Edwards and Price. To the extent that this rejection may still apply to the amended claims, the rejection is traversed.

Amended claim 12 recites a central processing unit with three states of operation and trace generating apparatus that includes a trigger unit, a timing trace generation unit, a program counter trace generation unit, and a data trace generation unit. The trigger unit generates control signals to individually enable and disable trace stream generation by each of the trace generation units responsive the current state, *i.e.*, a primary code execution state, a secondary code execution state, or an execution halt state, of the central processing unit. Thus, claim 12 clearly requires that each of the trace generation units is separately controllable by the trigger unit and may each be disabled or enabled based on the current state of a central processing unit having three states. Applicant has reviewed the art cited by the Examiner in rejecting claim 12 and finds nothing in the combination of Edwards and Price that teaches or suggests these limitations of amended claim 12.

In view of the above, amended independent claim 12 is patentable over the combination of Edwards and Price. Claims 13-15 depend from claim 12 and are thus patentable over Edwards and Price for at least the same reasons. Accordingly, withdrawal of this rejection is requested.

New Claims

New claim 17 is claim 6 rewritten in independent form including all of the limitations of base claim 1 and the intervening claim 5 with changes required to overcome the rejection of base claim 1 under 35 U.S.C. § 112, second paragraph. Thus, new claim 17 includes allowable subject matter as indicated by the Examiner. New claim 18 depends from amended independent claim 12 and is thus allowable over the art cited by the Examiner for at least the same reasons. Accordingly, favorable consideration of these new claims is requested.

Conclusion

Applicant believes this application and the claims herein to be in a condition for allowance and respectfully requests that the Examiner allow this application to pass to the issue branch.

Applicant believes that no additional fee is due at this time; however, please charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 relating to this matter to Deposit Account Number 20-0668, for Texas Instruments Incorporated.

Should the Examiner have further inquiry concerning these matters, please contact the below named attorney for Applicant.

Respectfully submitted,

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